

WHAT IS CLAIMED IS:

1. A fluid dynamic bearing motor assembly, the assembly comprising:  
an inner member;  
an outer member configured to rotate about a rotational axis at a first angular velocity; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.
2. The assembly of claim 1, further comprising a first fluid dynamic bearing, defining a first bearing region, disposed between the inner member and the orbital ring and a second fluid dynamic bearing, defining a second bearing region, disposed between the orbital ring and the outer member.
3. The assembly of claim 2, wherein the first fluid dynamic bearing and the second fluid dynamic bearing are configured such that positive pressure is maintained in the first bearing region and the second bearing region.
4. The assembly of claim 1, wherein the orbital ring is configured with a rectangular cross-section.

5. A fluid dynamic bearing motor assembly, the assembly comprising:  
an inner member;  
an outer member configured to rotate about a rotational axis at a first angular velocity; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring having a recirculation channel and configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.
6. The assembly of claim 5, further comprising a first fluid dynamic bearing, defining a first bearing region, disposed between the inner member and the orbital ring and a second fluid dynamic bearing, defining a second bearing region, disposed between the orbital ring and the outer member.
7. The assembly of claim 6, wherein the first fluid dynamic bearing and the second fluid dynamic bearing are configured such that positive pressure is maintained in the first bearing region and the second bearing region.
8. The assembly of claim 6, wherein the recirculation channel is configured to accommodate bearing fluid flow induced by the first fluid dynamic bearing and the second fluid dynamic bearing and to control pressure in the first bearing region and the second bearing region.

9. The assembly of claim 5, wherein the orbital ring is configured with a rectangular cross-section.
10. A fluid dynamic bearing motor assembly, the assembly comprising:  
an inner member configured to rotate about a rotational axis at a first angular velocity;  
an outer member; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.
11. The assembly of claim 10, further comprising a first fluid dynamic bearing, defining a first bearing region, disposed between the inner member and the orbital ring and a second fluid dynamic bearing, defining a second bearing region, disposed between the orbital ring and the outer member.
12. The assembly of claim 11, wherein the first fluid dynamic bearing and the second fluid dynamic bearing are configured such that positive pressure is maintained in the first bearing region and the second bearing region.
13. The assembly of claim 10, wherein the orbital ring is configured with a rectangular cross-section.

14. A fluid dynamic bearing motor assembly, the assembly comprising:  
an inner member configured to rotate about a rotational axis at a first angular velocity;  
an outer member; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring having a recirculation channel and configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.
15. The assembly of claim 14, further comprising a first fluid dynamic bearing, defining a first bearing region, disposed between the inner member and the orbital ring and a second fluid dynamic bearing, defining a second bearing region, disposed between the orbital ring and the outer member.
16. The assembly of claim 15, wherein the first fluid dynamic bearing and the second fluid dynamic bearing are configured such that positive pressure is maintained in the first bearing region and the second bearing region.
17. The assembly of claim 15, wherein the recirculation channel is configured to accommodate bearing fluid flow induced by the first fluid dynamic bearing and the second fluid dynamic bearing and to control pressure in the first bearing region and the second bearing region.

18. The assembly of claim 14, wherein the orbital ring is configured with a rectangular cross-section.
19. A fluid dynamic bearing assembly, the assembly comprising:  
an inner member;  
an outer member configured to rotate about a rotational axis at a first angular velocity; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.
20. A fluid dynamic bearing assembly, the assembly comprising:  
an inner member;  
an outer member configured to rotate about a rotational axis at a first angular velocity; and  
an orbital ring disposed between the inner member and the outer member, the orbital ring having a recirculation channel and configured to rotate about the rotational axis at a second angular velocity, the second angular velocity being less than the first angular velocity.